

## WHAT IS CLAIMED IS:

1. A process for culturing a progenitor cell population, comprising the step of culturing an input population of non-hematopoietic progenitor cells by non-static non-adherent suspension in serum-deprived nutrient medium.
2. A process according to claim 1, wherein the input population comprises progenitor cells having a CD45- phenotype.
3. A process according to claim 1, wherein the input population comprises mesenchymal progenitor cells.
4. A process according to claim 3, wherein the serum-deprived nutrient medium is supplemented with a factor selected from stem cell factor, interleukin-3 and a combination thereof.
5. A process according to claim 3, wherein the serum-deprived nutrient medium is supplemented with interleukin-3.
6. A process according to claim 3, wherein said input population further comprises a population of CD45+ progenitor cells.
7. A process according to any one of claims 1 to 6, wherein the input cell population is cultured for a period sufficient to expand the progenitor cell population therein.
8. A process for producing a differentiated non-hematopoietic cell, comprising the step of obtaining a progenitor cell produced according to a process as defined in any one of claims 1-7, and culturing said progenitor cell under conditions conducive to the differentiation thereof.
9. An isolated population of mesenchymal progenitor cells having a CD45-/CD123+ phenotype.